PROJECT TITLE : CIGARETTE AND SMOKE ANALYSIS

PERIOD COVERED : OCTOBER 23 - NOVEMBER 23 1981

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TAR AND NICOTINE CONTENTS OF CIGARETTE SMOKE

In the monthly report of September, we indicated the approximate correction factors which can be used to transform ISO-CORESTA tar and SN values to US or German values.

In the meantime, a more complete study has been performed and two regression curves have been established for each country.

a) Transformation of US Tar and SN values into ISO-CORESTA values (1)

These regression curves are of the type

$$y = ax + b$$

x being the tar or SN obtained by PM Richmond (FTC-US)

y being the tar or SN obtained by QA PME (ISO-CORESTA)

For ar and for the same butt length : $y = 1.11 x - 0.5$

For SN and for the same butt length : $y = 1.20 x - 0.10$

These calculations can be made only for cigarettes in the range of

US tar : 8 to 18 mg

US SN : 0.5 to 1.2 mg

For example:

Richmond (FTC-US)		QA PME (ISO-CORESTA)	
Tar (mg/cig)	SN (mg/cig)	Tar (mg/cig)	SN (mg/cig)
10.1	0.80	10.7	0.86

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b) Transformation of QA PME Tar and SN values to German values (2)

These regression curves are of the type

$$y = ax + b$$

x being the tar or SN obtained by QA PME (ISO norms)

y being the tar or SN obtained by PMG Munich (DIN norms)

For tar values higher than 10 mg : $y = 0.93\ x - 0.5$

For SN values higher than 0.7 mg : $y = 0.98\ x - 0.11$

For tar values lower than 10 mg and SN values lower than 0.7 mg, the following factors can be used:

$y = 0.93\ x$ for tar

$y = 0.88\ x$ for SN

For example:

QA PME (ISO-CORESTA)		PMG Munich (DIN)	
Tar (mg/cig)	SN (mg/cig)	Tar (mg/cig)	SN (mg/cig)
15.0	1.00	13.5	0.87
8.0	0.60	7.4	0.53

VISUAL CHECK OF THE FINISHED PRODUCTS' DEFECTS

A study was made to improve the manual of the defects and a proposal was sent to all QC PME affiliates (3).

YIELD OF CARBON MONOXIDE AND NITRIC OXIDE, PUFF BY PUFF

A modification of the program used on our HP 9825 computer now enables us to obtain the CO and NO values in mg and puff by puff (4), should this be necessary.

Graphs 1 and 2 show the total yield of CO and NO after n puffs for 5 versions which differ only in the level of dilution.

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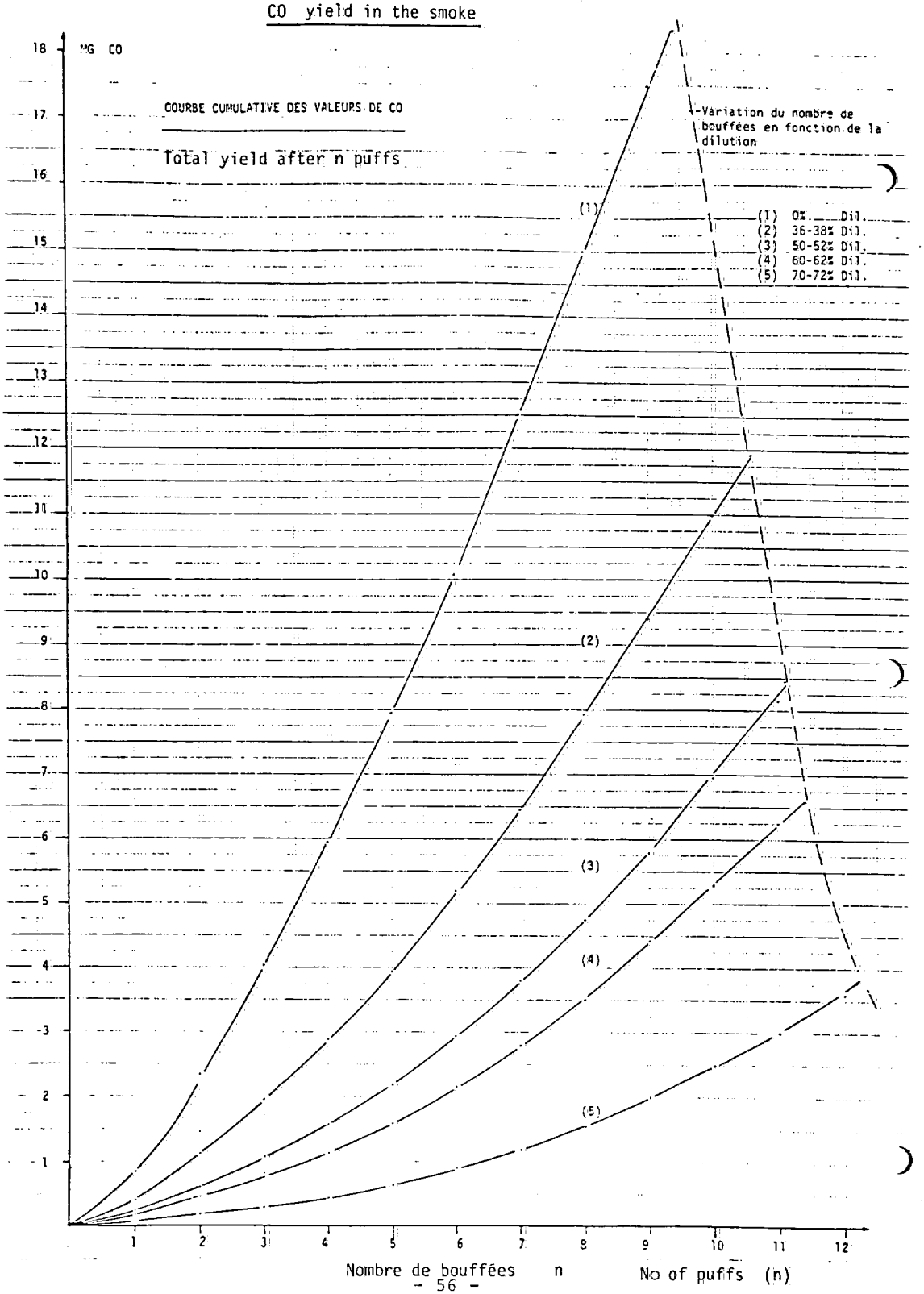
GRAPH 1

CO yield in the smoke



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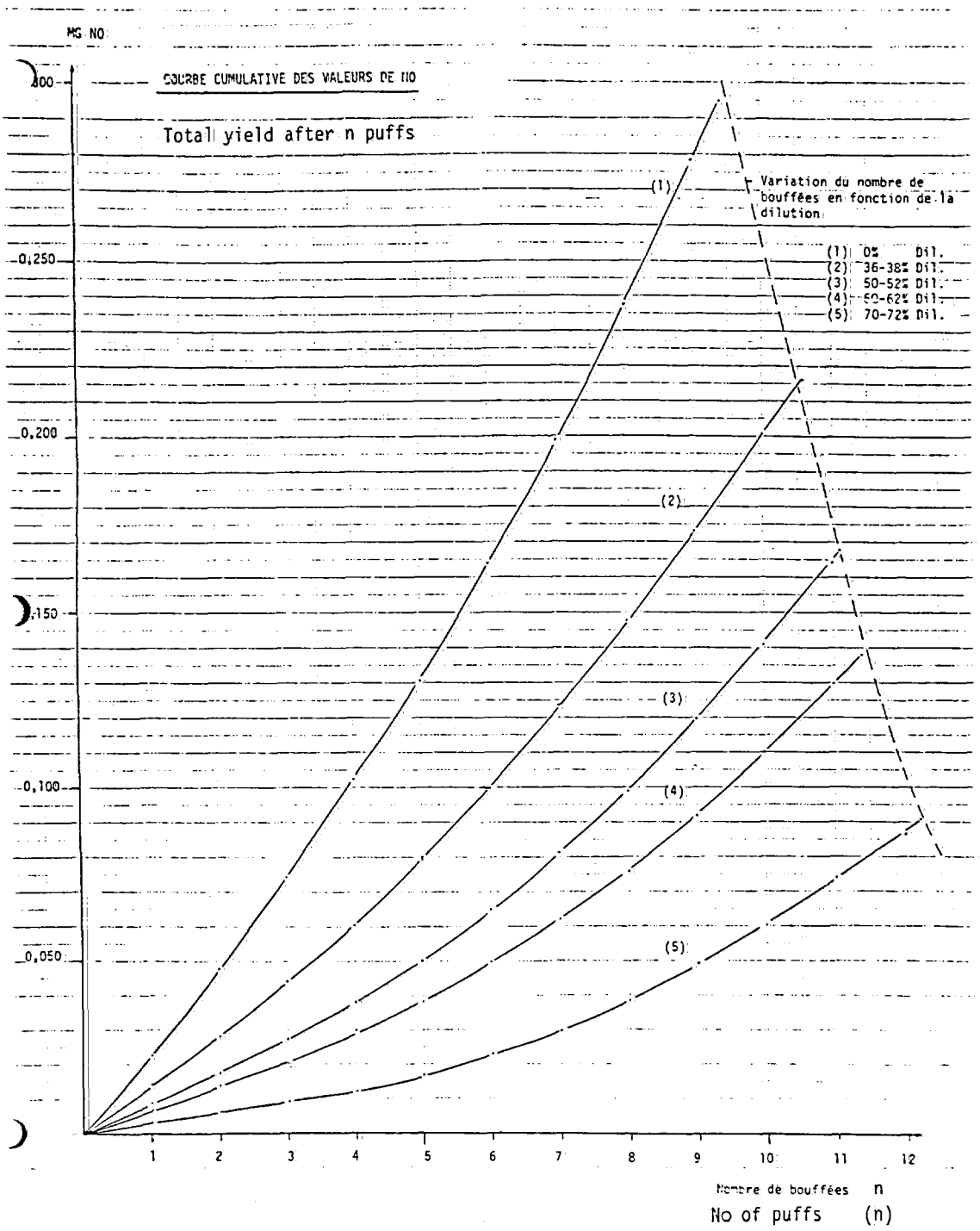
GRAPH 2

NO yield in the smoke



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CIGARETTE INFORMATION REPORT (CIR)

In order to improve the presentation of the CIR and to make the report easier to use, a questionnaire was sent to all CIR readers. We hope to finish the study by the end of December 1981.

PRODUCT REPORTS

Product reports were written on the following new or modified brands:

Brand	Manufacturer	Country of sale
Corps Diplomatique Luxury Mild 94/F (new brand)	Laurens	Belgium
London 84/F (new brand)	St.Paul's Tobacco	West Germany
Now Ultra Mild 79/F (new brand)	Reynolds (CH)	Norway
Kent Golden Lights (new brand)	Suomen Tupakka	Sweden

REFERENCES

1 Letter from Senehi-F (November 4, 1981)
2 Letter from Senehi-F (November 17, 1981)
3 Letter from Senehi-F (November 6, 1981)
4 Letter from Pittet-M (November 23, 1981)

SEF/edk/DECEMBER 2 1981

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